FIG. 3C depicts the bottom view of the electrode-free resonator 20, using the same numerals for like structures. The bottom electrode 33 is located on the bottom surface 26 with a bottom narrow portion 34 and bottom well portion 35 that extends into the bottom well 25. The bottom electrode 33 has the same electrode length, l_2, as the top electrode 27. Just as in FIG. 3A, the resonator 31 is positioned in the resonator area 30 with an exposed portion of the mesa 24 situated between the resonator 31 and the resonator area 30 defining a second acoustic gap, ~~t_7~~ l_4, 36. FIG'S 3A-3C also depict a number of dimensions of the electrode-free resonator 20, such as mesa length l_0, mesa width w_0, well length l_1, well width w_1, electrode length l_2, electrode width w_2 and so on.

Delete the paragraph at page 6, lines 10-17 and replace the deleted paragraph with the following replacement paragraph:

In operation, the top electrode 27 and bottom electrode 33, being acoustically coupled and controlled by the first and second acoustic gaps, ~~t_7~~ l_4, 32 and 36, respectively, generate an electro-magnetic field between the electrodes causing an excitation voltage within vibrating area 38 of the resonator plate 21 that generates an acoustic energy within resonator plate 21. The resonator thickness dimension, t3, determines the resonator frequency of the resonator 31. Electrode-free resonator area 30 provides an active element to trap acoustic energy and confine the acoustic energy to the resonator area 30, which minimizes acoustic energy leakage and provides a high Q factor (of about 3,000 to 7,000 Q) at 3GHz.

Delete the paragraph at page 6, line 22-page 7, line 5 and replace the deleted paragraph with the following replacement paragraph:

Referring now to the drawings, FIG'S 4A-4C are top, cross sectional and bottom views of a single-sided embodiment of an electrode-free resonator device 40 in accordance with the present invention. FIG. 4A depicts the top view of the single-sided electrode-free resonator 40, comprising a single-sided monolithic mesa resonator plate 41 with a top surface 42, a well 43, a mesa 44, a bottom surface 45, not shown in FIG. 4A, a top electrode 46 with a top narrow portion 47 disposed on the top surface 42 and a well portion 48 that extends into the well 43. The top electrode 46 is deposited on the top

surface 42 into the well 43 surrounding the mesa 44, allowing the mesa 44 to protrude upwards and provide an electrode-free resonator area 49. A resonator 50 is located in the resonator area 49. The mesa resonator plate 41 supports the resonator 50 and all energy is confined to well 43 because the electrode-free resonator area 49 provides an active element where most of the acoustic energy is trapped. The resonator 50 is positioned in the resonator area 49 with an exposed portion of the mesa situated between the resonator 50 and resonator area 49 defining an acoustic gap, ~~t_7~~ l_4, 51. Resonator 50 has a resonator length, l_3, and a resonator width, w_3. The electrode length l_2 can be greater than said resonator length l_3, and the electrode width w_2 can be greater than the resonator width w_3.

Delete the paragraph at page 7, lines 22-28 and replace the deleted paragraph with the following replacement paragraph:

In operation, the acoustically coupled top and bottom electrodes 46 and 53, respectively, are controlled by the acoustic gap, ~~t_7~~ l_4, 51, and generate an electro-magnetic field between them causing an excitation voltage within vibrating area 53 that generates an acoustic energy within the mesa resonator plate 41. The resonator frequency of resonator 50 is determined by the resonator thickness dimension, t_3, and the resonator area 49 traps acoustic energy, causing the acoustic energy to be confined to the resonator area 49 to minimize a leakage of acoustic energy and provide a high Q factor at 3GHz.